March 1978

This directory contains a brief description of the RSTS/E V06C documentation set and the documentation associated with RSTS/E Optional Products.

RSTS/E V06C

Documentation Directory

Order No. AA-2642C-TC

SUPERSESSION/UPDATE INFORMATION:	This manual contains information on RSTS/E, V06C as of March, 1978.
OPERATING SYSTEM AND VERSION:	RSTS/E, V06C
SOFTWARE VERSION:	RSTS/E, V06C

To order additional copies of this document, contact the Software Distribution Center, Digital Equipment Corporation, Maynard, Massachusetts 01754

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First Printing, July 1975
Revised: January 1977
Revised: March 1978

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CHAPTER 1

RSTS/E V06C DOCUMENTATION SET

Version V06C of RSTS/E, the Resource Sharing, Timesharing System/Extended, consists of software and a document set that describes the functions and operation of the software.

This directory contains, in Chapter 1, a brief discussion of the organization of the document set and the contents of each document; its purpose is to help you determine which documents you need and the order in which you should read them.

Chapter 2 of this directory contains a list of the software products and associated documentation that make up the RSTS/E V06C Optional Software Product Set.

1.1 THE RSTS/E DOCUMENT SET

When you receive RSTS/E Version V06C, you receive the V06C software on the distribution medium you requested, and the RSTS/E document set assembled into system binders.

The documentation in the system binders serves as a master documentation set for the RSTS/E installation. The RSTS/E system manager should assign a responsible individual to protect and maintain this master set, and to ensure that the most current and complete documentation is available to those needing it.

1.1.1 Organization of the System Binders

The system binders are organized into these volumes:

Volume 1. System Reference Documentation

Volume 2. System Procedures Documentation

Volume 3. Language Reference Documentation

Volume 1 consists of three system binders, and contains these publications:

Vol. 1A.
- RSTS/E V06C Software Product Description
- RSTS/E V06C Documentation Directory
- RSTS/E V06C Release Notes

Vol. 1B.
- RSTS/E V06C System Generation Manual
- RSTS/E V06C System Manager's Guide
- RSTS/E User Environment Test Package
- PDP-11 ROLLIN Utility Program

Vol. 1C. RSTS/E V06C Programming Manual
Introduction to RMS-11

Volume 2 consists of two system binders, and contains these publications:

Vol. 2A. RSTS/E System User's Guide
RSTS/E RUNOFF User's Guide
RSTS/E Text Editor Manual

Vol. 2B. DEC EDITOR Reference Manual
RSTS/E Task Builder Reference Manual
RSTS/E RMS-11 Utilities User's Guide

Volume 3 is one system binder containing these publications:

Vol. 3A. BASIC-PLUS Language Manual
PDP-11 MACRO Language Reference Manual
IAS/RSX-11M RMS-11 MACRO Programmer's Reference Manual

The following documents are also part of the RSTS/E document set (but are not included in the system binders):

Introduction to BASIC
RSTS/E Pocket Guide
Software Performance Report Form
RSTS/E V06C Installation Evaluation
Software Product User Survey
RSTS-11 Special Interest Group Application

1.1.2 Audiences for the RSTS/E Document Set

RSTS/E documentation has four target audiences.

- the RSTS/E system manager
- the advanced programmer
- the general timesharing user
- the novice programmer

To use the documentation effectively, you must determine which documents you need and in what order to read and use them. The following information will help you determine your audience category and direct you to the RSTS/E documents you should read first.

1.1.2.1 **Defining Audience Categories** - Although the wide range of RSTS/E customers prevents easy classification of audiences, the following guidelines, based on job responsibility, can be used to determine your audience category.

1. **System Manager:** responsible for overall system operation, including system generation and maintenance, control of system performance and system users, and supervision of day-to-day operations.

2. **Advanced Programmer (System Programmer):** responsible for developing, modifying, and maintaining programs at the system level. Sometimes called a system programmer, the advanced programmer codes in BASIC-PLUS, MACRO-11, or in a RSTS/E-supported compiler language.

3. **General Timesharing User:** responsible for developing applications software for the RSTS/E installation, the general timesharing user codes in BASIC-PLUS or a RSTS/E-supported compiler language.

4. **Novice Programmer:** responsible for learning how to program applications software on a RSTS/E system, the novice programmer codes in the BASIC-PLUS language.

1.1.2.2 **The Reader's Guide** - Once you have determined your audience category, scan Table 1-1, Reader's Guide, to find the titles of the publications recommended you first read. Then, read their summary descriptions in Section 1.2 of this chapter. If you have special interests, skim through the remaining summary descriptions for other publications you may need. If you have RSTS/E optional software, refer to Table 2-1, Optional Software Products for RSTS/E V06C in Chapter 2, for titles and order numbers of associated documentation.

To order documentation you need, contact your local DIGITAL office, or order directly from the DIGITAL Software Distribution Center: the address is on the title page of this directory.

Table 1-1
Reader's Guide

Audience Category	Recommended Reading Order
System Manager	1. RSTS/E V06C Software Product Description 2. RSTS/E V06C Documentation Directory 3. RSTS/E V06C System Generation Manual 4. RSTS/E V06C System Manager's Guide 5. RSTS/E V06C Release Notes and RSTS/E Software Dispatches 6. Others, as needed.[1]
General Timesharing User	1. RSTS/E V06C Documentation Directory 2. RSTS/E V06C System User's Guide 3. BASIC-PLUS Language Manual 4. DEC EDITOR Reference Manual 5. Others, as needed.
Advanced Programmer	1. Publications recommended for the General Timesharing User, then 2. Introduction to RMS-11 3. RSTS/E RMS-11 Utilities User's Guide 4. RSTS/E Task Builder Reference Manual 5. Others, as needed.
Novice Programmer	1. Introduction to BASIC 2. RSTS/E System User's Guide 3. BASIC-PLUS Language Manual 4. Others, as needed

[1] Please note especially the auxiliary documentation provided for feedback from customers: the Software Performance Report, Software Product User Survey, and RSTS/E V06C Installation Evaluation.

1.2 RSTS/E V06C DOCUMENT SUMMARIES

The following paragraphs summarize the information contained in each document in the document set. The documents are divided into the following categories.

System Reference
System Procedures
Language Reference
Auxiliary Documentation

1.2.1 System Reference Documentation

RSTS/E V06C Software Product Description (AE-3400J-TC)

This document describes the minimum hardware and prerequisite software for the product, lists optional hardware and software supported, defines the product's support category and update policy; and supplies ordering information. It is the legal definition of RSTS/E, Version V06C. [4 pp]

RSTS/E V06C Documentation Directory (AA-2642C-TC)

This directory is a summary description of the documentation set for RSTS/E, Version V06C. [10 pp]

RSTS/E V06C Release Notes (AA-5246B-TC)

This document contains information directed primarily to a system manager, and is required for generating RSTS/E. The Release Notes describe the differences between the current RSTS/E release and its preceding releases and establishes a maintenance notebook for documentation corrections, published software problems and solutions, and programming notes. [236 pp]

RSTS/E V06C System Generation Manual (AA-2669C-TC)

This manual describes the complete procedures to generate a RSTS/E V06C system image, build a BASIC-PLUS Run-Time System, initialize system structures, and build the BASIC-PLUS System Libraries. Because RSTS/E supports a variety of hardware and offers many optional software features, this manual also contains reference information useful for planning and maintaining RSTS/E systems. Especially important are the system initialization code options used both to optimize current system structures and to maintain and restructure RSTS/E.

Although the primary audience for this manual is the RSTS/E system manager, advanced programmers should read it to understand the composition of the system they will be using. [282 pp]

RSTS/E System Manager's Guide (DEC-11-ORSMD-B-D)

This guide is directed to the individual who administers and controls the local installation. It contains information on use of hardware and software resources. The material is more detailed than that presented in the RSTS/E System User's Guide and is directed more at the privileged user than at the nonprivileged user. Also included are the operational procedures necessary for daily functioning of the system. Included are guidelines for controlling system start-up, shut-down, and job execution; procedures for creating accounts and producing account statistics; procedures for operator services and spooling, for system error detection and correction; for system utility operations such as disk management, run-time system control, system statistics, terminal characteristics, adding CCL commands, adding system files, defining system logical names, and optimizing disk directories; for system back-up and restoration; and for the use of the RSTS/E Automated Patching Facility. [254 pp]

RSTS/E User Environment Test Package (AA-5704A-TC)

This document describes a software package that exercises RSTS/E system hardware in a time-sharing environment. The manual is written for DIGITAL manufacturing personnel, but could be used by a system manager to find malfunctioning hardware, isolate hardware errors, and impose a known, repeatable system load on a RSTS/E system. [42 pp]

PDP-11 ROLLIN Utility Program (DEC-11-OROAA-B-D)

This manual describes the commands and operating procedures for making image mode copies of disks or for transferring images to and from tape using the stand-alone program ROLLIN. [34 pp]

RSTS/E Programming Manual (DEC-11-ORPMA-B-D)

This manual presents device dependent features and more complex system function descriptions for the advanced programmer who uses RSTS/E. The manual describes both file structured and nonfile-structured operations for disk, magnetic tape, paper tape, terminals, and line printers. The manual defines system function calls to the monitor and explains programming conventions. [304 pp]

Introduction to RMS-11 (AA-0001A-TC)

This manual describes the basic concepts and facilities of Record Management Services for PDP-11 computer-based operating systems. Introduced to the advanced programmer are file organizations and access modes, file attributes, program operations on RMS-11 files, and run-time environments. The programmer must refer to the RSTS/E RMS-11 Utilities User's Guide for usage of the Record Management Services available under RSTS/E. [44 pp]

RSTS/E Pocket Guide (DEC-11-ORFCA-A-D)

This pocket-size booklet contains concise summaries of the most commonly used RSTS/E features. Included are both system information (standards, resource commands, library CCL commands, and file BACKUP) and BASIC-PLUS commands, functions, and statements. This booklet also includes information on device-dependent features, the BASIC-PLUS character set, and ASCII character codes. [76 pp]

1.2.2 System Procedures Documentation

RSTS/E System User's Guide (DEC-11-ORSUB-A-D)

This guide is directed to the time-sharing user. Information on system commands, reference material, and system programs is provided. Most functions described are nonprivileged and the material is general in nature. Also included are device operating procedures. [370 pp]

RSTS/E RUNOFF User's Guide (DEC-11-URUNA-B-D)

This guide presents operating and preparation information for the RSTS/E text formatting system program RUNOFF. The manual describes RUNOFF commands and their effect in the output text and shows how to produce a formatted output file. [36 pp]

RSTS/E Text Editor Manual (DEC-11-UTEMA-A-D)

This manual describes ASCII file creation, editing, and manipulating procedures for the EDIT.BAC program. The commands and operating procedures are defined in this manual and summarized in the RSTS/E System User's Guide for EDIT. [48 pp]

DEC Editor Reference Manual (AA-5789A-TC)

This manual describes the features of EDT, the standard DIGITAL text editor. Included is reference material about EDT files and buffers, text and string manipulations, command level and edit modes, command ranges and structures, and error reporting. Information on invoking and terminating EDT in a RSTS/E environment is found in the RSTS/E System User's Guide. [80 pp]

RSTS/E Task Builder Reference Manual (AA-5072A-TC)

This manual describes the functions and use of the Task Builder program for the advanced programmer. The Task Builder is used to transform BASIC-PLUS-2 or COBOL object module(s) into a single, executable image called a task. The manual contains instructions for using the Task Builder to: link compiled (object) modules; resolve external references; allocate system and task memory; produce a memory map; build an overlaid task; and link the task to a Run-Time System. Also included are appendixes on error messages, octal-decimal conversions, data formats and task image file structures, reserved symbol names, debugging aids, and hints on improving Task Builder performance. [192 pp]

RSTS/E RMS-11 Utilities User's Guide (AA-0003B-TC)

The advanced programmer uses this manual to learn the record management services available under RSTS/E. The manual describes the utility programs that back up, convert, define, display, and restore files, either as support for a source language's file processing statements or as system utility commands. Before using this manual, the programmer should read the Introduction to RMS-11. [102 pp]

1.2.3 Language Reference Documentation

Introduction to BASIC (AA-0155A-TK)

This handbook introduces the beginning programmer to the concepts, vocabulary, and use of BASIC. The BASIC described is a core language that can be used as a foundation for learning BASIC-PLUS, BASIC-PLUS 2 or other BASIC languages. This book describes elementary statements, program organization, branching, loops, subroutines, functions, and the concept of files. It also contains a glossary and many examples. [220 pp]

BASIC-PLUS Language Manual (DEC-11-ORBPB-B-D)

This manual introduces the beginning user to the more elementary parts of the BASIC-PLUS language, and explains for the experienced user the more advanced features of BASIC-PLUS as implemented in RSTS/E. Procedures are explained to help a user debug a program and to write more advanced code. The more commonly used system functions are described, along with the three forms of input/output available: formatted ASCII, virtual core, and Record I/O. The manual is a complement to the RSTS/E Programming Manual. [236 pp]

PDP-11 MACRO-11 Language Reference Manual (AA-5075A-TC)

This manual is the primary reference tool for users who are developing programs coded in the MACRO-11 assembly language. The manual has three parts. Part I, Introduction to MACRO-11, provides an overview of the language and defines source program format. Part II, Programming, describes symbols and expressions, relocation and linking, and addressing modes. Part III, MACRO-11 Directives, defines general assembler directives and macros. Appendixes include information on character sets, directives, error messages, coding standards, and allocating virtual memory. [182 pp]

IAS/RSX-11M RMS-11 MACRO Programmer's Reference Manual (AA-0002A-TC)

This manual is written for the advanced MACRO programmer. It includes the reference material needed to understand and use Record Management Services under a RSTS/E system. The manual explains how to declare RMS-11 facilities, access fields in control blocks, allocate and initialize control blocks, and perform file and record operations. Also included are appendixes on status code returns, a description of block I/O, the handling of ANSI-labeled magnetic tapes, formulas for calculating data capacities of RMS-11 files, sample code segments, and procedures for assembling and task building programs. [210 pp]

1.2.4 Auxiliary Documentation

The purpose of these documents is to provide timely feedback from DIGITAL customers.

Software Performance Report Form

By using this form, the customer ensures prompt reply to software or documentation problems encountered and to suggestions for software enhancements. Instructions for using an SPR are on the form itself and, specifically for the RSTS/E customer, in the RSTS/E V06C Release Notes.

RSTS/E V06C Installation Evaluation

This form should be completed and mailed by every person who installs a RSTS/E V06C system. Returned forms are evaluated by the RSTS/E development group to help ensure that future RSTS/E releases are easier and faster to install.

Software Product User Survey

This form should be completed by the RSTS/E system manager, then returned to DIGITAL. Its purpose is to allow DIGITAL to accumulate useful data on the customer base using our software products.

CHAPTER 2

RSTS/E V06C OPTIONAL SOFTWARE PRODUCTS AND DOCUMENTATION

There are separately-licensed optional software products available for RSTS/E, V06C. These are listed in Table 2-1. This table lists the software product name, version, SPD No., title of document, plus the order number. Use this table to see what other documents are available for your particular software and to order system product descriptions (SPD) of the software products listed.

For example, if your software product is CTS-500/E, V3, the SPD number is 13.6.2 and other documents available to you are CTS-500/E RPG II Language Reference Manual, order number AA-2111D-TC; CTS-500/E RPG II User's Guide (AA-2616B-TC), CTS-500/E System Generation Using Diskettes (AA-2321B-TC), and PDP-11 SORT Reference Manual (AA-3341C-TC).

Some or all of these documents may be of interest to you. If they are, you may order them as instructed on the title page of this directory.

If you desire a Software Product Description of your software product, contact your local sales office or salesman and provide them/him with the software product name and the SPD number.

Table 2-1
Optional Software Products for RSTS/E, V06C

Software Product Name	Version	SPD No.	Documentation Titles (and Order Numbers)
RSTS-E/2780	V3	10.50.2	2780 Remote Computer System Installation Notes (AA-1151A-TC) RSTS/E 2780 User's Guide (AA-2675B-TC)
DECnet/E	V1		RSTS/E DECnet/E System Manager's Guide (AA-5666A-TC) RSTS/E DECnet/E User's Guide (AA-5667A-TC)
CTS-500/E	V3	13.6.2	CTS-500/E RPG II Language Reference Manual (AA-2111D-TC) CTS-500/E RPG II User's Guide (AA-2616B-TC) CTS-500/E System Generation Using Diskettes (AA-2321B-TC) PDP-11 SORT Reference Manual (AA-3341C-TC)
DMS-500	V2	13.5.0	DMS-500 User's Guide (AA-2649B-TC)
FORTRAN IV/RSTS/E	V2	12.41.5	PDP-11 FORTRAN Language Reference Manual (AA-1855C-TC) RSTS/E FORTRAN IV Utilities Manual (AA-2140B-TC) RT-11/RSTS/E FORTRAN IV User's Guide (AA-2123A-TC) RSTS/E FORTRAN IV Installation Guide (AA-C762A-TC)

(continued on next page)

Table 2-1 (Cont.)
Optional Software Products for RSTS/E, V06C

Software Product Name	Version	SPD No.	Documentation Titles (and Order Numbers)
COBOL, PDP-11	V3	12.40.8	COBOL User's Guide (AA-1757C-TC) COBOL-11 Installation Guide (AA-1745C-TC) COBOL-11 Language Reference Manual (AA-1749D-TC) COBOL-11 Pocket Reference Card (AA-1750C-TC) RSTS/E COBOL Task Builder Supplement (AA-5194A-TC)
SORT-11	V2	12.7.1B	PDP-11 SORT Reference Manual (AA-3341C-TC)
BASIC-PLUS-2 (PDP-11)	V1	14.52.3	BASIC-PLUS-2 RSTS/E Installation Guide (AA-0156A-TC)
BASIC-PLUS-2/RMS-11K		13.7.1	BASIC-PLUS-2 Language Manual (AA-0153A-TK) BASIC-PLUS-2 RSTS/E User's Guide (AA-0154A-TC)
APL-11	V1	14.51.1	APL-11 Programmer's Reference Manual (AA-5076A-TC) APL-11 Release Notes (AA-5197A-TC)
RMS-11K for RSTS/E	V1.5	12.51.0	RSTS/E RMS-11K Installation Guide (AA-5185B-TC) Introduction to RMS-11 (AA-0001A-TC) RSTS/E RMS-11 Utilities User's Guide (AA-0003A-TC) RSTS/E RMS-11 Release Notes (AA-5185A-TC)

(continued on next page)

Table 2-1 (Cont.)
Optional Software Products for RSTS/E, V06C

Software Product Name	Version	SPD No.	Documentation Titles (and Order Numbers)
DIBOL-11/DECFORM	V1	13.8.1	CTS-500/DIBOL User's Guide (AA-5205A-TC) DIBOL-11 Language Reference Manual (AA-1760C-TC) DECFORM User's Guide (AA-5792B-TC)
DATATRIEVE-11	V1	12.48.0	DATATRIEVE-11 RSTS/E Installation Guide (AA-C745A-TC) Beginner's Guide to DATATRIEVE-11 (AA-C743A-TC) User's Guide to DATATRIEVE-11 (AA-C742A-TC)

READER'S COMMENTS

NOTE: This form is for document comments only. DIGITAL will use comments submitted on this form at the company's discretion. Problems with software should be reported on a Software Performance Report (SPR) form. If you require a written reply and are eligible to receive one under SPR service, submit your comments on an SPR form.

Did you find errors in this manual? If so, specify by page.

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Did you find this manual understandable, usable, and well-organized? Please make suggestions for improvement.

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Is there sufficient documentation on associated system programs required for use of the software described in this manual? If not, what material is missing and where should it be placed?

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Please indicate the type of user/reader that you most nearly represent.

- ☐ Assembly language programmer
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- ☐ Occasional programmer (experienced)
- ☐ User with little programming experience
- ☐ Student programmer
- ☐ Non-programmer interested in computer concepts and capabilities

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